WHIRRAKEE

May 2006 Vol. 27 No. 4

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MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.
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Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $34; Family $40; Concession: Single $28.50; Family $34. *Whirrakee* subscription only is $34.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. The invited speaker at general meetings starts at 8:00pm and meetings conclude with supper.
If a workshop is held prior to the meeting, it will be advertised and it usually starts at 7.00pm.
The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 7:30pm. Members of the Committee are the Office Bearer listed above and the following members: Ben Goonan, Richard Goonan, Bill Holsworth, Rob Moors, Rod Orr, Bob Ruddick, Darren White.

Excursions are conducted regularly and are advertised on the diary page of the *Whirrakee*. The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. In addition to local excursions, campouts are held several times each year, usually coinciding with long weekends or holiday periods.

The Bendigo Field Naturalists Club has one active group that meets regularly (the Fauna Study Group) and other groups that meet at irregular intervals.

Fauna Study Group: meets on the fourth Wednesday of the month at 7:30pm in the Golden Square Senior Citizens Building.
Chairman: John Burtonclay, Fadersons Lane, Mandurang (5439 5710)
Secretary: Bill Holsworth, 13 Nabilla Crs., Bendigo (5443 4063)
Equipment Officer: Maurie Lewis (0407 427179)

Bird Observers Group: This group has field excursions and the occasional lecture evening. Please consult the *Whirrakee* for details. Special bird observations should be reported to Anne Bridley 5449 3479.
To propose meetings or excursions please contact Kerrie Norris 5447 8017.

Front cover photo?...see article on page 4.

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club

Vol. 27, No. 4, May 2006

Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*) which is virtually endemic to the Bendigo region

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Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles. Contributions will be included as soon as possible after they are received, although articles received more than one week after the monthly General Meeting will probably be too late for inclusion in the next issue of *Whirrakee*.
Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editor's Note
The most exciting news for me this month was that Wollemi pines are now available for sale (yes – and in Bendigo!). Won't every household want one of these?
Recently, I sifted through some old Whirrakees, and I found a specimen of this pine on the front cover of the September 1998 issue. Jan and Rod Orr had been to Sydney and photographed this tree in the Botanic Gardens, then a small caged specimen (I have been told that it is still alive and much bigger, but that it looks a bit straggly). At the time, the tissue-cultured plants were to become available 'very soon'. This anticipation went on for years and only now (12 years or so after their discovery) are they actually for sale. Now all I have to do is save up for one. The rain dragon in the Easter Parade seems to have worked a bit at least and some grass is growing again in the backyard. Perhaps this is good time to plant a Wollemi pine…

Front Cover Photographs – Photographer: Clive Fisher (see article on page 4)

Short Notices

Birds Australia Campout Sat 10 - Mon 12 June Wychitella area

Club members are invited to join Birds Australia on the Queens Birthday weekend for a campout in the Wychitella area.

On Saturday we will be meeting David Baker-Gabb at the Australian Bush Heritage property adjoining Mt Korong.

This property has a good population of ground-dwelling birds such as Yellow Robin, White-browed Babblers, Brown Treecreepers and is well worth a visit.

For further information contact:
Euan Fothergill ph 93081289 email euanfothergill@hotmail.com
or Anne Bridley ph 544934

Release of The State of Australia's Birds 2005: Woodlands and Birds.
http://www.deh.gov.au/biodiversity/publications/birds-05/index.html

Matthew Comer has organised the next **garden working bee** to take place on May 6th from 9am. Future garden working bees will be on the 1st. Saturday of the month. All are welcome.

A Note from our Club Librarian
The last ten years of *Whirrakee* have been bound and are on the shelf in the 'library closet' .
The cost to the club was $150 (at $50 per volume). This is very reasonable and thanks to W.A. Latimer at Barker's Creek. There are three sets of loose *Whirrakee* for those last ten years. Use or lose 'em, as there is not room for such extra copies.

Diana Collier

Western Australia's marine plant database

A new internet-based record of Western Australia's marine plants has been launched by the Australian and State Governments. The project, which was developed by the WA Department of Conservation and Land Management in conjunction with a number of Perth institutions, was funded by the Natural Heritage Trust and Coastwest-Coastcare. The database provides on-line access to around 1000 species of WA's marine macro algae and access to some 20 000 specimen details.
See: http://www.naturebase.net/florabase
(from the March 2006 Bulletin of the Ecological Society of Australia, Hon. Editor: Sue Murray-Jones. ...actually that whole WA flora site looks wonderful...)

Leaves for Garden Mulch
Claret Ash leaves and fruit tree leaves will be bagged and ready to be picked up. Please contact Margaret Kane on 5442 6418 if interested and to arrange address of pick up and date.

Error in Chris Tzaros' Wildlife Book
'Wildlife of the Box-Ironbark Country' Copies are still available for $30.00 from Bill Holsworth.
Please note:
Error correction on pages 184-185.
Most users of the book will have noticed that the numbered sites listed do not match the numbers on the map. This error occurred in the final stages of printing, but a correct map and legend is available on the CSIRO website. Go to
http://www.publish.csiro.au/pid/4856.htm

The front cover photo: Shingleback Lizard

by Clive Fisher

This *Tiliqua rugosus* (or *Trachydosaurus rugosus)*, or shingleback lizard, was crossing Cohn Street from the Jackass Flat Nature Conservation Reserve, possibly to drink water at the race on the other side of the street, earlier this year.

There seems to be confusion as to whether the shingleback is of the genus *Tiliqua*, or has a genus of its own, *Trachydosaurus*.

In Coutts (nd), this sentence appears: It is classified scientifically as *Trachydosaures rugosus* and is the only member of its genus (p. 16) ... Close relatives are the blue-tongue lizards of the genus *Tiliqua*.

Sharing this opinion is Cronin (2001, p. 8), but Smart & Watharow (2005) are of the opinion that the shingleback's genus is *Tiliqua*.

Wilson & Knowles (1988) and Swann *et al.* (2004) are of the opinion that the genus is *Tiliqua*, but its species is *rugosa*, rather than *rugosus*.
The word *rugosa* refers to wrinkled or ridged body covering.

References

• Coutts (ed) (nd*) The Living Australia, No. 10*. Bay Books: Kensington, N.S.W.
• Cronin, L. (2001) *Australian Reptiles and Amphibians*. Envirobooks: Annandale, N.S.W.
• Smart, M. & Watharow, S. (2005) *Snakes, Lizards & Frogs of the Victorian Mallee*. C.S.I.R.O. Publishing: Collingwood, Vic.
• Swann, G. et al (2004) *A Field Guide to the Reptiles of N.S.W.* Reed New Holland, Sydney.
• Wilson, S. & Knowles, D. (1988) *Australian Reptiles*. Collins Publishers: Sydney.

APRIL GENERAL MEETING
Speaker: Kevin Rule "Interesting and unusual Eucalypts of Northern Victoria"

Author: Sabine Wilkens (with additional notes from Peter Ellis and Kevin Rule)

Wouldn't it be wonderful to retire from your job and then have a passion to pursue? Many of our members are doing just that, and so does Kevin Rule. He used to be a teacher, and now he is Victoria's only person who works full-time on eucalypt taxonomy. Kevin is based at the Melbourne Herbarium and is engaged in a complete revision of Victorian eucalypts. He is currently preparing a paper for publication that lists no fewer than 30-35 new taxa (species and subspecies). In the 15 years he has now spent working with eucalypts, he has described 22 new eucalypts for South-Eastern Australia, most of which occur in Victoria and are rare and endangered. Many form just small populations in isolated areas and this work does involve a lot of travelling.

Kevin knows the Bendigo district, with its many interesting and unusual eucalypts, very well, and for this evening he had prepared a special key that covers some of the more unusual populations.

Members were given a copy of this key (see following pages) and let loose on the over 20 specimens that Kevin had brought along.
All the specimens were numbered and had additional notes about characteristics like the bark, growth form and juvenile leaves attached (without these extra notes, one would have got stuck in the key fairly early on). This is a general difficulty with eucalypt classification – you need to know a lot of extra information. Unlike many other flowering plants, one cannot make an identification with the flower alone.

After a suitable time, the identity of the unknown specimens was revealed.

Kevin did not go into detail as to how he would decide if a eucalypt is a new species or just a subspecies or perhaps a hybrid. I was not there to ask the question after the workshop, but it is something that crossed my mind as he talked of many interesting sub-populations of the district. What makes them different in the first place? Their genes, their environment, an interaction between the two? How long would it take to see if they breed true? Is this just coincidence, or do these plants have an advantage with these features in this environment? Below are some examples from Kevin's notes.

Red Box, *Eucalyptus polyanthemos* has a new subspecies called *marginalis*. This subspecies was established recently to cater for populations of small trees of mallees, which feature greenish adult leaves and have no wax at any stage of their lives. They occur along the south-western margins of the species distribution limit (thus *marginalis*). Why are they different in this way and how long have they been different?

Another example is from the Inglewood area where local populations of *E. polybractea* appear to build up a stocking of rough bark in winter and shed most of it in spring. There are also western populations of the species in the Wedderburn and St Arnaud area, which carry persistent rough bark and which may need to become a separate subspecies. Such populations along with other anomalous box-barked trees from various sites in the region have been referred to as *E. odorata*, which appears to be a South Australian endemic. These may, in fact, be hybrids between *E. polybractea* and *E. microcarpa* (previously referred to as *E. woollsiana*).
Lots more study is required to solve the identities and relationships of some of these taxa. Somehow I have the feeling this is a never-ending job but Kevin is obviously not deterred by the enormity of it.

Some more interesting information was revealed at question time (from Peter Ellis' minutes):
Maurie Lewis asked which was the rarest eucalypt in the state. Kevin responded as to how difficult it was ascertaining this. For example, in the Wimmera region, much of the native vegetation had been cleared, leaving lots of little remnant islands and roadside verges that had not been studied. In addition, the fact of enormous climatic changes back and forth over eons would have seen many unusual local variants evolve. Kevin mentioned a small stand of 8 or 9 mallees related to *E. viridis* on Mt Jeffcott, near Donald as amongst the rarest in Victoria, and that perhaps the rarest was one tree only, and yet to be identified, north of Nhill.
Bill Holsworth asked if the Government is doing anything to protect rare species. Kevin replied that he had been payed to do a submission on this (federal funded). It was asked if DNA testing was of any use in identification, and whilst 'yes' is the answer, taxonomic classification is still the preferred procedure. There is a lack of knowledge by the experts in the use of the DNA procedure at this stage, but it will come, and it will probably change the taxonomic results drastically.
In response to another question, Kevin said the State Herbarium was very good and efficient at receiving specimens and enquiries and in attending to them.

This is good news for those who might find an unusual stand of eucalypts or even just one individual, and who want to pursue the matter further and find out the name. If this is you, make sure you collect the buds and fruits (nuts) along with a branchlet, and make notes about the growth form, bark on the stem and upper branches, juvenile leaves (if possible) etc.

Happy eucalypt hunting!

BENDIGO REGION: KEY FOR EUCALYPTS

1. Buds and fruits quadrangular in cross-section ..... ***E. froggattii***
1. Buds and fruits round in cross-section or slightly angled or ribbed 2

2. Leaf bases oblique (uneven) at all stages 3
2. Leaf bases even at all stages 4

3. Buds clavate (club-shaped); fruits with valves enclosed ..... ***E. obliqua***
3. Buds ovoid; fruits with valves exserted ..... ***E. baxteri***

4. Mature canopy dominated by ovate or sub-orbicular adult leaves 5
4. Mature canopy dominated by linear to lanceolate (narrow to broad) adult leaves .. 9

5. Branchlets, buds and immature fruits waxy; adult leaves glaucous or sub-glaucous 6
5. Wax absent from all structures; adult leaves green or blue-green 7

6. Buds on long pedicels; fruits 5-7 mm long ..... ***E. polyanthemos*** subsp. ***vestita***
6. Buds sessile; fruits 9-14 mm long ..... ***E. albens***

7. Rough bark, when present, consisting of chunky, tessellated, greyish plates ; fruits obconical with valves approximately at rim level ..... ***E. ovata***
7. Rough bark box type; fruits cupular or barrel-shaped; valves enclosed 8

8. Box bark extending to about mid-trunk; upper bark smooth, lustrous, grey to copper-coloured; fruits sessile ..... ***E. behriana***
8. Box-bark extending to at least major branches; upper bark smooth, off-white or light grey; fruits with long pedicels ..... ***E. polyanthemos*** subsp. ***marginalis***

9. Rough bark, if present, confined to base or lower trunk 10
9. Bark rough, extending to at least upper trunk 18

10. Inflorescences 3-flowered 11
10. Inflorescences 7 or more-flowered 13

11. Buds waxy; pedicels as long as buds; fruits with valves enclosed, 8-11 mm diam ..... ***E. leucoxylon*** subsp. ***pruinosa***
11. Buds not waxy; pedicels < half length of buds; fruits with exserted valves, 5-9 mm diam 12

12. Old bark present on trunk and major branches as reddish strips and plates, but not as long ribbons; juvenile leaves and coppice leaves glaucous, orbicular; adult leaves dull or rarely sub-lustrous, light green or blue-green ..... ***E. rubida*** subsp. ***rubida***
12. Old bark forming a rough stocking at the base or on the lower trunk and hanging from the trunk and major branches as long ribbons; juvenile and coppice leaves green, lanceolate; adult leaves lustrous, green ..... ***E. viminalis*** subsp. ***viminalis***

13. Trees 14
13. Mallees 16

14. Basal bark box-like; operculum shortly conical; fruits cylindrical or barrel-shaped; valves enclosed ..... ***E. melliodora***
14. Basal bark compact, hard, cracking; operculum beaked or horn-shaped 15

15. Juvenile leaves broadly ovate; buds with a horn-shaped operculum; valves slightly exreted ..... ***E. blakelyi***
15. Juvenile leaves lanceolate; buds with a beaked operculum; valves prominently exserted ..... ***E. camaldulensis***

16. Adult leaves blue-green to glaucous; branchlets, buds and immature fruits waxy ..... ***E. polybractea***
16. Adult leaves lustrous and green; all other adult structures non-waxy 17

17. Bark smooth throughout; juvenile leaves ovate, glaucous; mature buds red; fruits with a white disc ..... ***E. leptophylla***
17. Box-like bark always present at least on lower trunk; juvenile leaves linear, green; mature buds green; fruits without a white disc ..... ***E. viridis***

18. Bark impregnated with kino, hard, furrowed (ironbark); inflorescenes 3-flowered ..... ***E. tricarpa*** subsp. ***tricarpa***
18. Bark stringy, stringy-like, peppermint or box-like; inflorescences mixture of 3 or 7-flowered or 7 or more-flowered 19

19. Fruits with disc ascending and valves exserted 20
19. Fruits with disc descending or level; valves enclosed or at rim level 22

20. Buds fusiform (spindle-shaped) with a long, beaked operculum; fruits 8-12 mm diam; disc markedly domed ..... ***E. macrorhyncha***
20. Buds ovoid or diamond-shaped with a short, conical operculum; fruits 3-7 mm diam; disc slightly domed 21

21. Juvenile leaves orbicular; buds sessile, waxy, diamond-shaped; fruits 5-7 mm diam ..... ***E. cephalocarpa***
21. Juvenile leaves linear-elliptical; buds pedicellate, non-waxy, ovoid; fruits 3-5 mm diam ..... ***E. aromaphloia***

22. Adult leaves lustrous, green 23
22. Adult leaves dull or sub-lustrous, blue-green or sub-glaucous 24

23. Trees; fruits sessile, 6-9 mm diam ..... ***E. goniocalyx***
23. Mallees; fruits pedicellate; 3-4 mm diam ..... ***E. viridis***

24. Bark peppermint type; fruits with valves at rim level 25
24. Bark box-like; disc with valves enclosed 26

25. Juvenile leaves glaucous, broadly ovate; adult leaves, coarse-textured, to 3 cm broad; fruits with a thick pedicel ..... *E. dives*
25. Juvenile leaves blue-green, narrowly lanceolate; adult leaves, thin-textured, to 1.5 cm wide; fruits with a slender pedicel ..... ***E. radiata*** subsp. ***radiata***

26. Branchlets, buds and immature fruits waxy 27
26. Branchlets, buds and immature fruits non-waxy 28

27. Mallees; fruits pedicellate, barrel-shaped ..... ***E. polybractea***
27. Trees; fruits sessile, cupular ..... ***E. nortonii***

28. Bark extending to the minor branches; juvenile leaves linear-lanceolate; inflorescences forming a many- branched, leafless compound panicle ..***E. largiflorens***
28 Bark extending to the upper trunk; juvenile leaves ovate or sub-orbicular; inflorescences axillary, along the main stem or a leafless terminal branchlet 29

29. Adult leaves thin-textured, to approximately 1 cm wide; pedicels as long as fruits; staminal ring often persisting on immature fruits ..... ***E. melliodora***
29. Adult leaves, course-textured, > 1.5 cm wide; pedicels to about half the length of fruits; staminal ring absent ..... ***E. microcarpa***

From the Mailbag
Author: Elaine Mathison

Each month the club receives a number of newsletters and magazines: some by subscription and some in exchange for Whirrakee. These are available from the club library.

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THE VICTORIAN NATURALIST(FNCV)
December 2005

This issue celebrates the 125th anniversary of the FNCV, and includes many of the papers presented at a symposium held to mark the occasion.

- Rambles, reports and reserves: the FNCV's early conservation of Victoria's natural heritage.
- The close union between the Herbarium and the Naturalists - to their mutual benefit.
- Women in the FNCV 1880-1980: professional & amateur naturalists contributed much to the club.
- Marine studies and the FNCV: the Marine Research Group was a separate entity until recently.
- From "fungs" to Fungimap: an interest from the very beginning.
- The FNCV and the VNPA: the latter yet another "child" of the Field Naturalists' Club.

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PARKWATCH(VNPA)
March 2006

"Protecting forests and woodlands in far west Victoria: conservation in a time of global warming" reports on some of the areas to be examined when the State Government considers establishing extra reserves in this region.

"Great Otway National Park" describes the areas which have been linked together to form this new larger park. It extends along the coast from Bells Beach to Princetown and inland towards Colac. The diverse vegetation communities have high flora and fauna values and contain many rare and endangered species.

"National Parks and Fire" deals with some of the frequently asked questions about this subject, including the procedure for control burning, what land type burns most easily, and how fire affect parks.

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THE BIRD OBSERVER(BOCA)
December 2005

- Mulga Magic: birding in far west Queensland.
- Super Zoom and Digiscoping Equipment for bird photographers
- Water Watching: a great variety of birds in south-east Queensland
- A gallery of black and white honeyeaters

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Also received recently:

*Geelong Naturalist (Geelong FNC)
April 2006
*The Ballarat Naturalist(Ballarat FNC)
April 2006
*Castlemaine Naturalist (C'Maine FNC)
April 2006
*Field Nats News(FNCV)
April 2006
*The Plains Wanderer(Echuca BOCA)
December 2005 - January 2006
* Victorian Landcare
Summer 2005

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Mystery photo competition

What is this?

Entries close a day before finalising the June edition of *Whirrakee*.

Diary
The General, Bird Observers Group and Fauna Study Group meetings are held at the Golden Square Senior Citizens Building, Old High Street, Golden Square, unless otherwise indicated.

General Meetings
Wednesday, May 10 7.30pm
Carol Hall will be showing us some slides from her trip to Western Australia where she also attended the 2004 ANN conference.

Sneak preview of June speaker: Mark Antos from 'Birds Australia' (Royal Australasian Ornithologists Union) will talk about 'ecology and conservation of ground-foraging birds in Northern Victoria'.

Sneak preview of September topic: This talk will (hopefully) be about recovery of rare plants. Two of these are orchids from the Bendigo district.
For details of speakers for the next few months, see next *Whirrakee*.

Excursions
We have an exciting excursion program for 2006. The next trip is to the Wellsford and Mandurang Forest to look at habitat, fauna and flora.
Leave: 8.00am
Return: 3pm
$10.00 for the bus.
Please ring Richard Goonan (0423418815) if you intend to come.
And...bring you lunch.
The February edition of *Whirrakee* (page 3) has the entire 2006 excursion program.

Fauna Group
This group meets (in the clubrooms) on the fourth Wednesday of the month at 7.30pm.

Wednesday, May 24 7.30pm
Topic: Cane Toads

Wednesday, June 28 7.30pm
Common (Indian) Myna

Fauna Excursions
Every Friday morning starting at around 9 to 9:30, the Fauna Group inspects nest boxes in the Spring Gully area. The excursions are led by Maurie Lewis, 16 Vains St. Golden Square. Phone 0407 427 179 or 5442 1813. Phone Maurie to confirm exact departure times and location. If you don't phone but go directly to Maurie's house and find nobody at the house between 9 and 9:30 then the excursion is not on.

Wildlife Rescue & Information Network Inc.
W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals. It is fully endorsed by the Dept of Sustainability and Environment.
Please call our Emergency Number for Help for Fauna in Need.
Phone: 0419 356433.

Bendigo Field Naturalists on the web
Any comments about the site are most welcome.
http://communitysites.impulse.net.au/bendigofieldnaturalists/fnats.html

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New Edition of Box Ironbark CD
Just to let you know that the new edition of 'Plants and Animals of the Box-Ironbark Area of Central Victoria' is available at the usual price of $ 50.

...and **Wildlife of the Box Ironbark Country by Chris Tzaros** is also still available at $ 30.-. See note on page 3 regarding a printing mistake.

Please contact Bill Holsworth if you are interested in purchasing one of these.